

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

CLAIMS LISTING (claims 1-24)

Claim 1 (*Canceled*).

Claim 2 (*Currently Amended*): ~~The polishing method of Claim 1 and further~~
~~comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing
the first batch with one or more silica (SiO₂) based chemical mechanical polishing
slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP
tool which uses ceria (CeO₂) based chemical mechanical polishing slurries or
equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second
CMP tool so as to expose in each workpiece, a predefined and detectable surface
level; and

(d) using end-point detection in the second CMP tool to determine when the
predefined surface level of a given workpiece has been exposed.

3. (*Original*) The polishing method of Claim 2 wherein said end-point
detection includes at least one of optical detection, force feedback detection,
temperature detection, and chemical composition detection.

Claim 4 (Currently Amended): ~~The polishing method of Claim 2 and further~~
~~comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing
the first batch with one or more silica (SiO₂) based chemical mechanical polishing
slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP
tool which uses ceria (CeO₂) based chemical mechanical polishing slurries or
equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second
CMP tool so as to expose in each workpiece, a predefined and detectable surface
level;

(d) using end-point detection in the second CMP tool to determine when the
predefined surface level of a given workpiece has been exposed; and

(e) using time measurement in the first CMP tool to determine when said
partial polishing of each workpiece in the first batch should end.

Claim 5 (Currently Amended): ~~The polishing method of Claim 4 and further~~
~~comprising:~~

~~(e)~~ (f) shortening a time limit for said time measurement step in response to
an indication that imminent use the first CMP tool is being requested for another
batch of workpieces.

Claim 6 (Currently Amended): ~~The polishing method of Claim 2 and further~~
~~comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with one or more silica (SiO_2) based chemical mechanical polishing slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses ceria (CeO_2) based chemical mechanical polishing slurries or equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second CMP tool so as to expose in each workpiece, a predefined and detectable surface level;

(d) using end-point detection in the second CMP tool to determine when the predefined surface level of a given workpiece has been exposed; and

(e) automatically adjusting polishing pressure in said first CMP tool in response to an indication that workpieces in said supplied first batch are to be only partly-polished.

Claim 7 (Currently Amended): ~~The polishing method of Claim 2 and further comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with one or more silica (SiO_2) based chemical mechanical polishing slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses ceria (CeO_2) based chemical mechanical polishing slurries or equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second CMP tool so as to expose in each workpiece, a predefined and detectable surface level;

(d) using end-point detection in the second CMP tool to determine when the predefined surface level of a given workpiece has been exposed; and

(e) automatically adjusting velocity of a polishing pad in said first CMP tool in response to an indication that workpieces in said supplied first batch are to be only partly-polished.

Claim 8 (Currently Amended): ~~The polishing method of Claim 2 and further comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with one or more silica (SiO_2) based chemical mechanical polishing slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses ceria (CeO_2) based chemical mechanical polishing slurries or equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second CMP tool so as to expose in each workpiece, a predefined and detectable surface level;

(d) using end-point detection in the second CMP tool to determine when the predefined surface level of a given workpiece has been exposed; and

(e) automatically adjusting feed rate of a slurry used by said first CMP tool in response to an indication that workpieces in said supplied first batch are to be only partly-polished.

Claim 9 (Currently Amended): ~~The polishing method of Claim 2 and further comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with one or more silica (SiO_2) based chemical mechanical polishing slurries or equivalents;

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses ceria (CeO_2) based chemical mechanical polishing slurries or equivalents to further polish the batch of partly-polished workpieces;

(c) completing the polishing of the partly-polished workpieces in the second CMP tool so as to expose in each workpiece, a predefined and detectable surface level;

(d) using end-point detection in the second CMP tool to determine when the predefined surface level of a given workpiece has been exposed; and

(e) automatically changing between use in said first CMP tool of a first slurry of respective first quality and a second slurry of respective second and different quality in response to an indication that workpieces in said supplied first batch are to be only partly-polished.

Claims 10-17 (Canceled).

Claim 18 (Original): A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with a corresponding one or more of first chemical mechanical polishing slurries, where the supplied workpieces of the first batch

each include at least first and second different materials, and where the first CMP slurries are characterized by one or both of:

(a.1) relatively low-selectivity for removal of the first of said at least first and second different materials relative to removal of the second of said materials; and

(a.2) relatively poor ability to inherently drive the polishing process towards a high degree of planarity; and

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses a corresponding one or more of second chemical mechanical polishing slurries, where the second CMP slurries are characterized by one or both of:

(b.1) relatively high-selectivity for removal of the first of said at least first and second different materials relative to removal of the second of said materials, the high-selectivity being greater than said low-selectivity; and

(b.2) relatively good ability to inherently drive the polishing process towards a high degree of planarity, the good ability being better than said relatively poor ability.

Claim 19 (Original): The polishing method of Claim 18 wherein said second chemical mechanical polishing slurries comprise ceria-based CMP slurries.

Claim 20 (Original): The polishing method of Claim 18 wherein said first chemical mechanical polishing slurries comprise silica-based CMP slurries.

Claim 21 (*Canceled*).

Claim 22 (*Currently Amended*): ~~The polishing method of Claim 21 and~~
~~further comprising:~~ A polishing method comprising:

(a) supplying a first batch of workpieces to a first CMP tool for partly polishing the first batch with a corresponding one or more of first chemical mechanical polishing slurries;

(b) forwarding the partly-polished first batch of workpieces to a second CMP tool which uses a corresponding one or more of second chemical mechanical polishing slurries, different from the first chemical mechanical polishing slurries;

(c) using a time-based stopping algorithm in the first CMP tool to determine when to stop polishing each workpiece in the first CMP tool so as to achieve partial polishing; and

(d) using an end-point detection algorithm in the second CMP tool to determine when to stop polishing each workpiece in the second CMP tool so as to achieve further polishing of each workpiece in the second CMP tool beyond said partial polishing.

Claim 23 (*Previously Presented*): The polishing method of Claim 22 and further comprising:

(e) shortening a time limit for said time-based stopping algorithm in response to an indication that imminent use of the first CMP tool is being requested for another batch of workpieces.

Claim 24 (*New*): The polishing method of Claim 18 wherein all of said characteristics (a.1), (a.2), (b.1) and (b.2) are present.
